Report Plexos Project

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Contents

Abstract

1 Introduction

2 Theory

2.1 Methods in present work

2.2 intermittent resource handling

2.3 reservoir hydro handling

2.4 region exchange

2.4.1 Advantages

2.4.2 Disadvantages

2.5 investment initiatives for renewable sources

- investment support
  One time financial support to cover part of the investment costs. The support is large enough to make the investment profitable. Some differences can be used for fine tuning, e.g. more support for wind power in areas with less wind.
  - advantages
    - possibility of finetuning
  - disadvantages
    - requires much capital at beginning
    - no incentive to roduce
    - limited security for investor
    - in case of fine tuning: much administration
- tendering
  Auction for a certain amount of capacity which shall be installed. Won by the offers requiring the lowest support. This initiative is also done as investment support, but with a tendering procedure. Providers are asked for support bids, the cheapest one gets the support.
  - advantages
    - competition between suppliers, therefore lower costs than investment support
  - disadvantages
    - same as investment support, but
    - less predictability
    - prone to corruption
- feed-in tariff
  A fixed price for feeded kWh is payed for a predefined period.
  - advantages
    - promotion of mid-term and long-term technologies
    - investment security for producer
  - disadvantages
    - possible risk of technology overfunding
- premium
  Like feed-in tariff, but instead of a fixed price an additional amount per kWh is paid to the producer.

- advantages
    * market based
- disadvantages
    * less certainty than feed-in tariff

- green certificates

3 Analysis

3.1 MT Schedule

3.1.1 normal inflow scenario

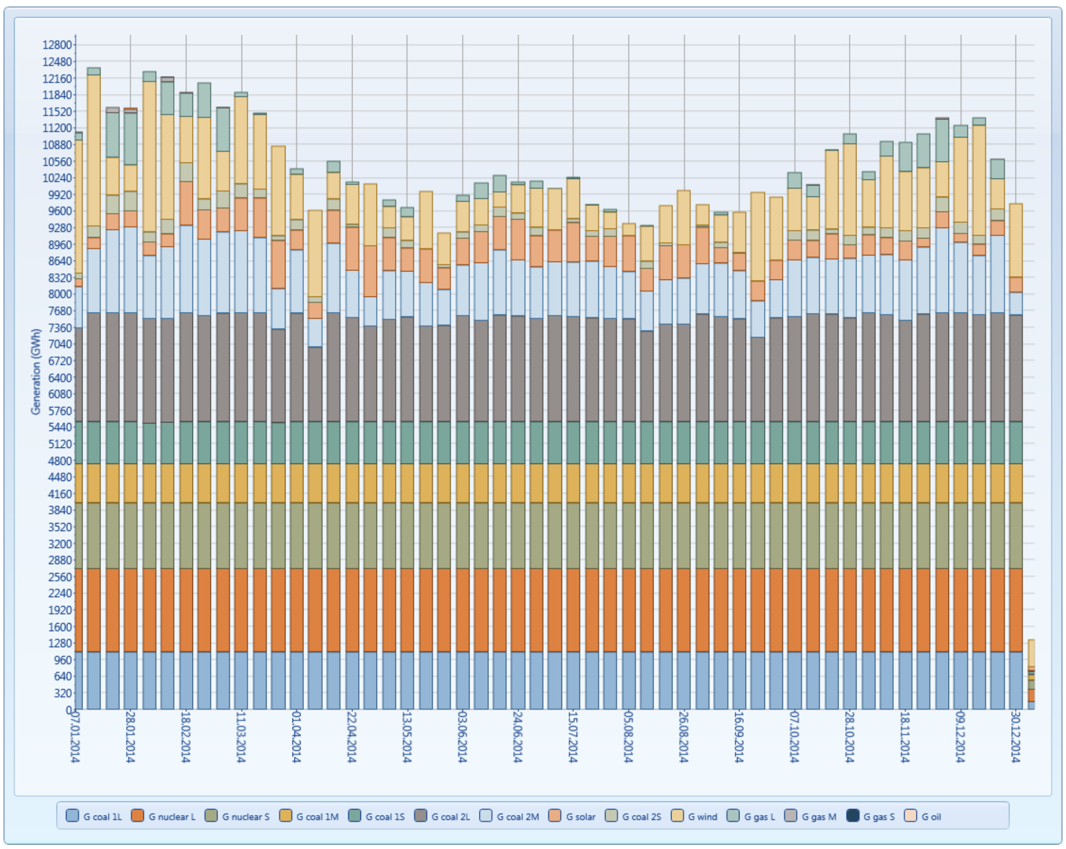

Figure 1: Optimal generation dispatch for Germany 2014 with normal inflow

optimal generation dispatch

transmission

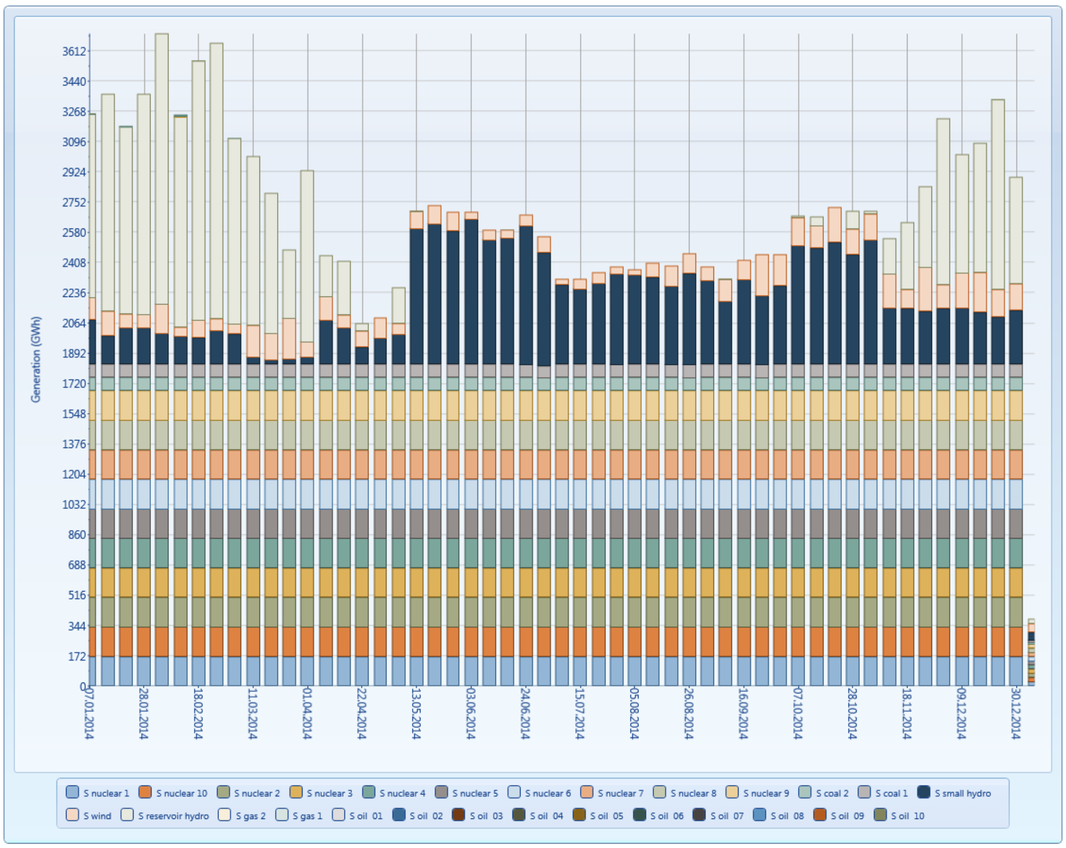

Figure 2: Optimal generation dispatch for Sweden 2014 with normal inflow

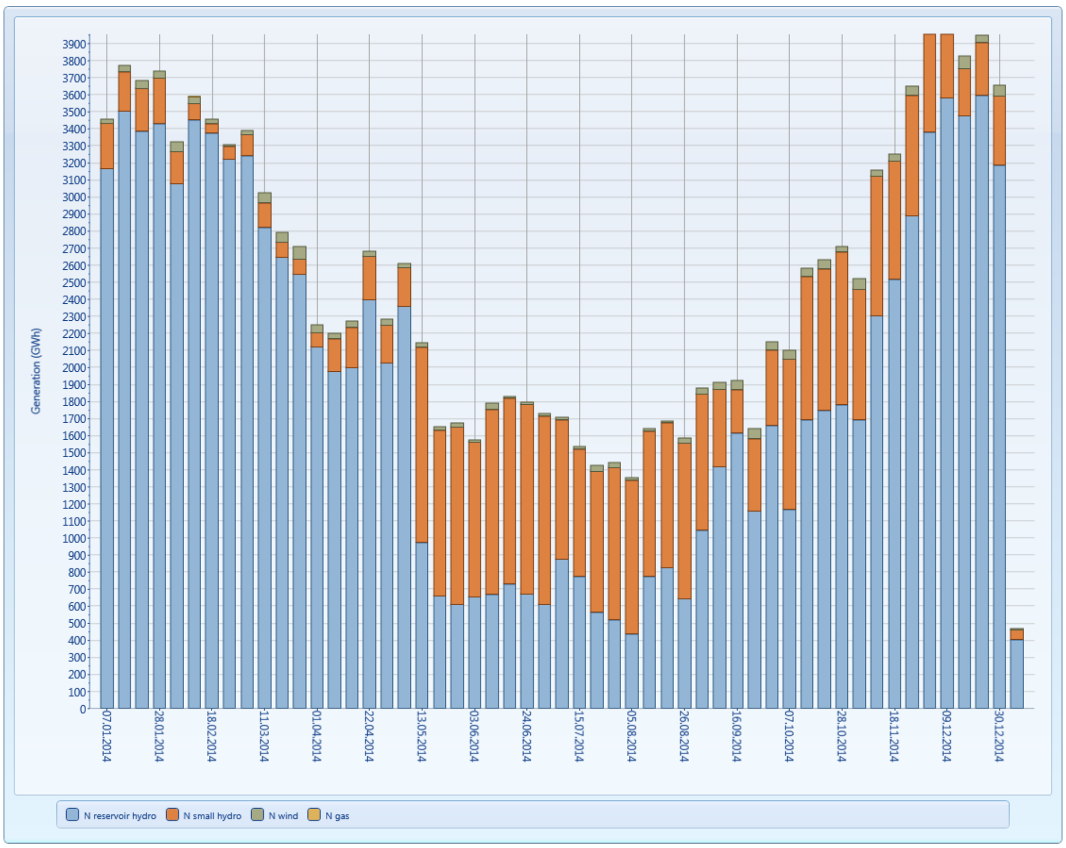

Figure 3: Optimal generation dispatch for Norway 2014 with normal inflow

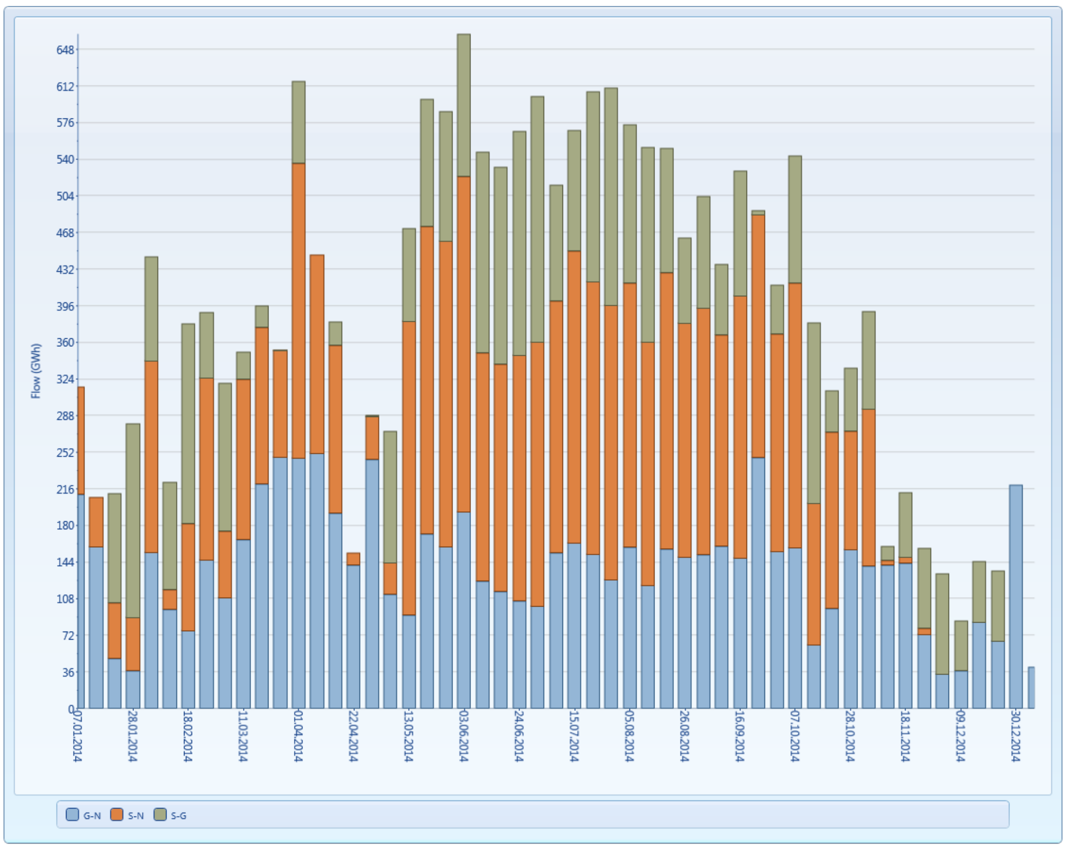

Figure 4: Transmission between N/W/S with normal inflow

emission

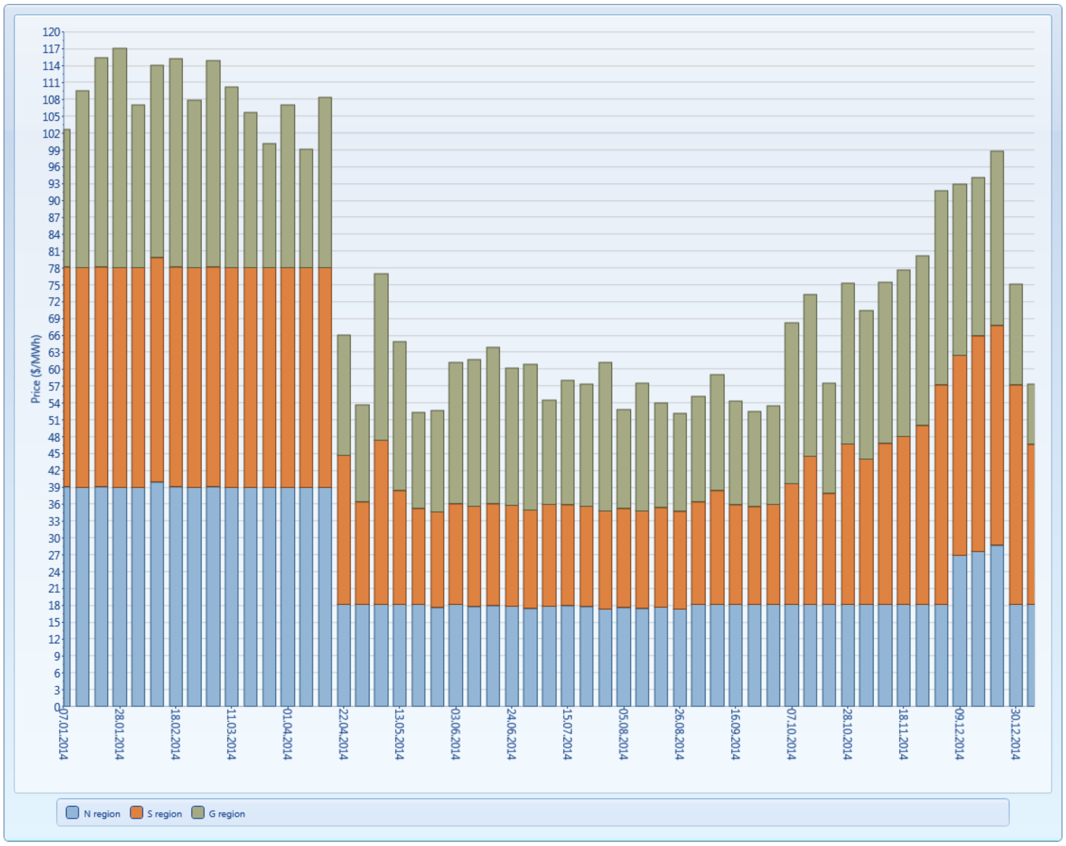

Figure 5: Calculcated prices with normal inflow

price

3.1.2 high inflow scenario

3.1.3 low inflow scenario

3.2 Expansion planning

4 Conclusion